Claims

1. Photoinitiator of formula la:

la

2. Photoinitiator of formula lb:

lb

3. Photoinitiator of formula Ic:

lc

4. Photoinitiator of formula Id:

id

5. Clear photopolymerisable systems including one or more bifunctional photoinitiators of formula I:

$$x_1$$
 x_2

where X₁ and X₂ are different;

X₁ is

 X_2 is

wherein R_1 and R_2 are independently linear or branched or cyclic C_1 - C_6 alkyl, or together represent C_2 - C_6 alkylene; Z_1 is $-NR_3R_4$ or -OH, and R_3 and R_4 are independently C_1 - C_6 linear or branched or cyclic alkyl or C_2 - C_6 oxaalkylene.

6. Clear photopolymerisable systems according to claim 5., containing at least one photoinitiator of formula la:

7. Clear photopolymerisable systems according to claim 5., containing at least a photoinitiator of formula lb:

8. Clear photopolymerisable systems according to claim 5., containing at least a photoinitiator of formula lo:

Clear photopolymerisable systems according to claim 5., containing at least a photoinitiator of formula Id:

- 10. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces, wherein the clear photopolymerisable system containing reactive ethylenically unsaturated oligomers and/or monomers and at least a bifunctional photoinitiator of formula I, preferably of formula Ia, Ib, Ic or Id is prepared and applied to obtain, after polymerisation, a coating having a thickness higher than 10 microns and then photopolymerised with a light source emitting in the UV-visible spectrum up to 400 nm.
- 11. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces according to claim 10., wherein the clear photopolymerisable system is applied to obtain, after polymerisation, a coating having a thickness between 10 and 100 micron.
- 12. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces according to claim 11., wherein the clear photopolymerisable system contains at least a bifunctional photoinitiator of formula la.

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- 13. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces according to claim 11., wherein the clear photopolymerisable system contains at least a bifunctional photoinitiator of formula lb.
- 14. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces according to claim 11., wherein the clear photopolymerisable system contains at least a bifunctional photoinitiator of formula Ic.
- 15. Procedure for the realisation of high thickness coatings for wood, paper, plastic, card board or metal surfaces according to claim 11., wherein the clear photopolymerisable system contains at least a bifunctional photoinitiator of formula Id.
- 16. Solid substrate coated with a clear coating having a thickness between 10 and 100 micron obtained by photopolymerisation of a photopolymerisable system according to any of claims from 1. to 5..